C19210 Copper Iron, High Conductivity

Fisk Alloy Wire Inc.
P.O. Box 26
10 Thomas Road N.
Hawthorne, NJ 07506 U.S.A.

Phone: (973) 825-8500
Fax: (973) 427-4585
E-mail: sales@fiskalloy.com

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Chemical Composition - Limits	Chemical Composition - Nominal
Cu rem (99.8 min incl named elements)	Cu 99.9
Fe 0.05-0.15	Fe 0.10
P 0.025-0.04	P 0.03

Fabrication Index	
Soldering	5 - Excellent
Hot Worked	5 - Excellent
Cold Worked	5 - Excellent
Brazing	5 - Excellent
Machinability	1 - Poor

Physical Properties

Annealing Range (Min)	840 °F
Annealing Range (Max)	1020 °F
Density	0.323 lb/in³
Electrical Resistivity (Annealed)	13 Ω·cir-mil/ft @ 68 °F
Electrical Conductivity (Annealed)	80% IACS @ 68 °F
Coefficient of Thermal Expansion	9.4 per °F (68-572 °F)
Modulus of Elasticity (Tension)	18 ksi
Melting Point (Solidus)	1,750 °F
Melting Point (Liquidus)	1,920 °F

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Round Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi) Min	TENSILE STRENGTH (ksi) Max	MILL LIMITS (inch)
Annealed	O61	27.0	42.0	.0010 - .1285 inch
1/4 Hard	H01	44.0	56.0	
1/2 Hard	H02	52.0	64.0	
3/4 Hard	H03	58.0	70.0	
Hard	H04	62.0	74.0	
Extra Hard	H06	65.0	77.0	
Spring	H08	68.0	80.0	
Extra Spring	H10	70.0		

Square Wire

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi) Min	TENSILE STRENGTH (ksi) Max	MILL LIMITS (inch)
Annealed	O61	27.0	42.0	.0100 - .0808 inch
1/4 Hard	H01	44.0	56.0	
1/2 Hard	H02	52.0	64.0	
3/4 Hard	H03	58.0	70.0	
Hard	H04	62.0	74.0	
Extra Hard	H06	65.0	77.0	
Spring	H08	68.0	80.0	
Extra Spring	H10	70.0		

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Rolled Flat

TEMPER NAME	TEMPER CODE	TENSILE STRENGTH (ksi) Min	TENSILE STRENGTH (ksi) Max	MILL LIMITS (inch)
Annealed	O61	27.0	42.0	Thickness: .0100 - .0500 inch Width: .0150 - .2500 inch
1/4 Hard	H01	43.0	53.0	
1/2 Hard	H02	47.0	60.0	
3/4 Hard	H03	52.0	62.0	
Hard	H04	56.0	66.0	
Extra Hard	H06	60.0	70.0	
Spring	H08	64.0	74.0	
Extra Spring	H10	66.0		

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